

- 29 -

ABSTRACT

A method of tuning an electroabsorption modulator (EAM). A reference average power loss factor for light having a reference peak wavelength that is modulated by the EAM is provided. This loss factor is based on operation of the EAM using a reference bias voltage, a reference temperature, and a reference modulation signal which has a predetermined duty cycle. Input light is coupled into the EAM and modulated using a modulation signal which has the same duty cycle as the reference modulation signal. The input power of the input light and the average output power of light emitted from the EAM are measured. These input and average output powers are used to generate an average power loss factor. The average power loss factor is compared to the reference average power loss factor and the bias voltage and/or the temperature of the EAM are adjusted to reduce differences between these loss factors.